The Foreign Exchange Markets Under Floating Rates

Introduction

The following report grew out of an initial study presented to the Group of Thirty at its first plenary session in Bermuda early in 1979. That study emphasized the growth and significance of foreign exchange-related activity in the United States, and centred on the New York market. Subsequently, the Study Group of exchange market participants, which undertook the initial study, organized similar surveys of other major financial centres. This report summarizes the results. It is based on written answers to a questionnaire and selected interviews conducted with banks and international industrial corporations located in Europe and Asia as well as the United States.

The bank questionnaire was sent to 56 commercial and merchant banks, varying considerably in size and in the extent of their international operations. Twenty of the banks are located in London, 16 in Germany, Switzerland and France, 10 in Tokyo and Singapore and 10 in the United States. The banks in the United States were approached as it became clear that the survey was eliciting a good response, but the New York market remains underrepresented in the report. The industrial corporations that participated in the survey generally represent large, capital intensive businesses, experienced in international operations. It is important to bear this in mind when considering the main findings of the survey. The survey was completed in October, 1979.

These findings are grouped together in two major sections:

Part I: Summaries of the evidence
Part II: Reports on answers to the questionnaires

The broad purpose of the questionnaire was to ascertain the *views of market participants* in the principal market centers on the functioning

of the foreign exchange markets since the advent of floating exchange rates. The report does not analyze the growing influence and impact of small, but emerging, foreign exchange market centres in developing countries.

It should also be understood that the structure and content of the questionnaires themselves, though carefully drafted, may have given rise to some responses that, out of context, are misleading. Certainly some of the statements made may be disputed. In the report on answers to the banking questionnaire, in particular, it is important to bear in mind that the answers should not be interpreted as referring to any particular episode or period, except where the question specifically makes reference to such a period or episode. The emphasis of this phase of the study was on collecting the raw data of market impressions on the functioning of the markets.

I and the other members of the Study Group wish to thank all those who assisted in the preparation of the survey. We owe a special debt of gratitude to the members of an advisory committee of market participants which was formed in London. The members of that committee are: Mr. John Sangster (Bank of England); Mr. R. Barham (Morgan Guaranty Trust); Mr. W.J.F. Batt (National Westminster Bank); Mr. A.J. Price (Deutsche Bank); and Mr. Peter Robeson (Baring Brothers). The assistance given by this committee was invaluable both in the drafting of the questionnaires and in other phases of the study.

Dennis Weatherstone

PART ONE

Summaries of the Evidence

How Bankers View the Markets

In general, the picture that emerges from this survey is of a foreign exchange market that has adapted well to the exigencies of a 'managed' floating rate regime. On balance, the market has become more competitive as a result of the entry of new banks, the growth of new centres (notably in the Far East), the development of international brokerage and the wider and more rapid dissemination of news. In historical perspective, perhaps the most important development of these years has been the resulting growth of a global, 24-hour foreign exchange market.

Non-bank customers have benefited from these developments in several ways. Margins have been reduced; the habit of 'shopping around' for the finest quotations has grown; and the options open to corporate treasurers have widened in terms both of the timing of transactions and the institutions through which they may be executed. In most centres, a majority of banks reported that profits from foreign exchange trading had not kept pace with the growth in volume. In reply to the question as to whether earnings have increased at the expense of customers or central banks, most of those who replied asserted that the bulk of the growth in profits had accrued at the expense of central banks.

Defects

On the other hand, the market is also thought to have developed some defects, as compared to the situation before the advent of floating (though many respondents attributed these to exchange rate instability rather than to floating itself):

(a) There is clear evidence of an increasing concentration on the spot market, and the availability of longer term (over one year)

forward contracts has become more limited. Some of the smaller banks that specialized in this business (notably in London) have been squeezed out of the market by the increase in risk and the lessened acceptability of their names after the Herstatt collapse.

(b) There is some evidence of a reduction in the 'depth' of the market (defined here as its ability to absorb large trades without temporary distortion), though this varies considerably from one centre and currency to another. Bankers report a greater number of smaller spot trades by contrast with the larger trades possible in the pre-Herstatt floating period.

(c) The rapid growth of instantaneous, world-wide communication of news, and in the number of factors thought to influence exchange rates (such as various definitions of countries' money supplies, etc.) has put a premium on the ability of the markets to discriminate between relevant and irrelevant information. This occurred at a time when the growth in the number of market participants brought an increase in the number of younger and less experienced dealers, and when international brokers were introducing many new 'names' to the market. Such institutional factors may have made a marginal and temporary contribution to exchange rate volatility.

(d) More serious is the allegation that some banks use the newer means of communication, such as commercial monitor screens (and 'open voice' trading) to manipulate the market by putting in false inputs.

(e) Some respondents alleged that some very large banks (both in the United States and Continental Europe) and the trading companies in Japan are able to 'lead' the market. This factor (if true) may also have contributed to increased volatility. Indeed, although the markets are generally believed to have become more competitive, some bankers claimed on the contrary that they had become oligopolistic due to the increasing market power of a very few large banks. Such allegations may, however, result from a confusion between large trades (which naturally tend to be transacted by large banks) and the use or misuse by banks of their own resources. It is worth noting that in no centre did a majority of respondents believe that the markets had lost "efficiency" because of the reduced role of smaller banks.

(f) Among the factors deemed to have caused a loss of market 'efficiency' in practice (see table 4), *the intensification of supervision or regulation of banking* was mentioned by a majority of respondents in Zurich; *the maintenance or intensification of ex-*

change controls by a majority of respondents in Frankfurt and New York; the larger scale of *official intervention* by a majority in Frankfurt; the tightening of *guidelines issued by banks' own management* by those in Zurich; changes in *accounting standards* by respondents in New York; and awareness of the *increased magnitude of foreign exchange movements* by a majority in London and Frankfurt. On balance, however, most bankers did not believe that the markets had lost "efficiency."

"Overshooting"

Nearly all bankers, in all centres, said that the markets "overshoot" in the short run, but a large majority thought that they were reasonably accurate in determining medium-term trends and few of them thought that short-term over-and undershooting contributed to economic disequilibria. On the contrary, several said that overshooting forced governments to adjust their domestic policies and thus contributed in this way to more stable conditions. Until governments adjusted, however, markets tended to be 'one way.' The speculator, narrowly defined, had become too small to perform his classical role of helping to shift the market towards equilibrium levels; nor have corporations taken on this role because their policies on leading and lagging of trade payments often reinforce rather than counter market distortions.

Central banks are not thought to have filled this vacuum by their intervention policies. One of the striking features of the survey was the criticism of central bank intervention made by many respondents. Bankers in the Far East, and notably in Singapore, were in favour of a minimal degree of intervention, or none at all; respondents in the United States appeared to view larger-scale intervention as indispensable to the orderly functioning of the markets; bankers in the three continental European centres were particularly critical of the techniques and *modus operandi* of intervention, while not generally disputing the need. Several acknowledged that coordination between monetary authorities in Europe (particularly between Zurich and Frankfurt) had improved, whereas coordination with the Federal Reserve Bank of New York remained more difficult.

The markets as viewed by corporate treasurers

Based upon a limited sample of approximately twenty of the largest, most sophisticated, capital intensive multinational corporations, it appears that businesses have adjusted to the floating rate system rather well. Most report that their basic financial philosophy has not changed. Significantly, corporate managements believe that floating rates have not materially impeded international trade or investment. However, foreign exchange exposure management has required more attention from senior management, the costs of conducting international business may have increased slightly, and judgments on the future course of the exchange rates of major currencies play a larger role in corporate decision-making than used to be the case.

The general view appears to be that the dimension of risk has changed, especially in the shorter term, but not to a degree that affects materially a corporation's willingness to make direct foreign investments or to engage in international trade. The short-term requires closer monitoring than under a fixed-rate system. This has led in many cases to greater centralization of policy making and a more rigorous examination of the implications of foreign exchange movements for financial decisions. Also, for American corporations, there is more concern about the effects of foreign exchange fluctuations on reported interim financial statements as a result of present accounting conventions. Daily fluctuations are believed to increase risk in certain ways, influence the timing of transactions, and in some cases shorten the time horizon. Notwithstanding the possibility of having to record a foreign exchange loss, with few exceptions corporations state they have not foregone an economic gain to an accounting charge. They do, however, allow that the effects of major foreign exchange fluctuations are considered.

Although floating rates have resulted in changes regarding the short-term, they are perceived as having a negligible influence on decisions for the long-term. The awareness of foreign exchange considerations has been heightened (and in some cases foreign exchange considerations have become the dominant factor in portfolio investment and borrowing decisions), but short-term fluctuations remain subor-

dinate in basic business decisions, especially for commitments to new property, plant and equipment. This indifference is attributed to two factors: (1) the costs associated with floating rates are small relative to other factors influencing their investments, and (2) over time, foreign exchange rates should mirror real economic developments. "Floating rates have made foreign investment more complicated but not less attractive." Most said floating rates introduced an additional element of risk into international trade and investment but that it was not material. No respondents said that floating exchange rates had resulted in the elimination, deferral or reduction of any foreign direct investment but some indicated a higher rate of return was required of commitments abroad; none said that they influenced the level of their company's international trade.

However, a minority of respondents said that floating exchange rates have raised the cost of conducting business internationally. More frequent, but still selective, hedging of foreign exchange exposure entails costs, even though it was thought to be impossible to measure these. There were also costs in establishing an exposure management team and in the amount of management time and effort directed to foreign exchange matters. But again, some respondents added that these may be related more to exchange rate volatility than to floating rates. Moreover, a number cited the better and more comprehensive information required and received by corporate headquarters.

With regard to pricing and invoicing policy, only a few respondents said that they raised prices to cover the incremental expenses of managing foreign exchange positions and hedging. (It is notable, by contrast, that some bank respondents believed that companies do include the higher cost of more extensive foreign exchange cover in their prices, "whenever they are able.") With regard to invoicing policy, a preference for invoicing in strong currencies if possible was expressed, because of the short-run benefit, even though it was broadly agreed that *in the long run* market forces will preclude any supplier or customer from using this aspect of a contract to extract a consistent gain. (Also, it may be easier to pass on price changes resulting from exchange rate changes rather than those resulting from policy decisions.)

Many respondents had anticipated a diminution of capital controls and trade barriers with the advent of floating exchange rates. Although some relaxation had occurred, it has been much less than anticipated. Furthermore, in some instances, e.g. the United Kingdom, the greater freedom is properly attributed to developments other than those in the foreign exchange market.

There was a remarkable consensus among respondents in their general view of the foreign exchange markets. They agreed that the price of a currency does accurately reflect all information available to market participants (i.e. that it is an "efficient" market) but also that at any given time an exchange rate often did not reflect the "intrinsic" value of a currency. As one put it, much of the "combined information" is "misinformation or guessing" that is frequently exaggerated by latest news, good or bad, for a currency. In this regard they agreed with the respondents to the banks questionnaire. With regard to future movements in rates, none believed that he could consistently predict movements more accurately than "the market," but many thought they could do so "often enough to justify making the attempt." Purchasing power parity comparisons, i.e. adjusting currency values for differential inflation rates, was the most widely accepted method employed in forecasting appreciations or depreciation of individual currencies. Some stressed that they reckoned they could thereby predict *trends* more accurately than "the market," which at any given time was ruled above all by psychological factors.

In sum, the evidence of this survey suggests that major corporations have accepted the floating rate regime as one that has led neither to large-scale disruption of their international activity nor to disillusionment over future investment opportunities, though there is some evidence that it may have raised their costs marginally. The major difficulty in interpreting such results, as the respondents themselves emphasized, is that of distinguishing between the effects of floating rates and those of increasing exchange-rate volatility. Although not explicit in the responses, one can readily infer a preference by industrial corporations for floating rates, if the currencies adjust gradually to changes in real economic factors. This proviso is a key point; the volatile fluctuations experienced over the past few years are deemed disruptive.

PART TWO

Survey of Market Opinion

1. The Survey of Banks

This section contains reports on the responses of banks' senior foreign exchange managers to the questionnaire reproduced in full on the following pages. It was mailed to 56 banks in London, New York (and other cities in the USA), Frankfurt, Zurich, Paris, Tokyo and Singapore. Written replies were received from 35 banks in time for inclusion in the report, and supplementary interviews were conducted with 30 banks. Central banks were not asked to answer the questionnaire (which was designed for commercial banks), but, as is evident from the reports, generous help was received from several central banks. Some banks supplied written answers but were not available for interviews while others gave interviews but did not supply written answers.

Questionnaire for Banks

Introduction

The following questions are an attempt to assess how floating rates have been working and the impact of development in the markets themselves. They are *not* an opinion poll on preference for fixed or floating rates.

In answering any quantitative question or in trying to quantify an answer it is essential (although admittedly very difficult) to bear the effects of inflation in mind and to attempt to answer in real terms.

Structure of the Market

1. Has the number of participants in the market, both banks and corporations, increased markedly since 1973?
2. Over this period has there been a marked increase or decrease in real terms in the volume of
   (a) interbank business;
   (b) customer business?
3. If your answer to either part of Question 2 is positive, what would you say are the main reasons for the increase (or decrease)?
4. Has the proportion between interbank and customer business changed, and if so in which way?
5. Have spreads generally widened, narrowed or remained the same?
6. Have the rapid advances in communications and the instant reporting of news had any significant effect on markets?
7. Has the internationalization of broking activity had a significant effect on the markets?
8. Do futures markets in exchange, like the IMM in Chicago, now have a significant influence on world markets, and if so in what way?

Behavior of the Market

9. Allowing for the fact that in recent years leading economies have diverged more markedly, do you consider that exchange markets have been reasonably accurate in determining short or medium term trends for the exchange rates of leading currencies?
10. Alternatively, do you think that markets overreact to changing circumstances and move exchange rates far beyond underlying equilibrium levels, i.e. to overshoot, and contribute in the process to the divergence among economies?
11. What has been the role of speculation in the markets? Is there any evidence that the speculator has played his "textbook" role of damping down movements in exchange rates? Or has speculation on balance added to such movements?
12. Have markets on balance gained or lost in terms of their breadth, depth and resilience?
13. If in your opinion the markets have lost efficiency in recent years, what would you say are the main reasons for this? Is it
    (a) Due to the intensification of supervision or regulation of banking by central banks and other supervisory bodies?
    (b) Due to the maintenance or intensification of exchange controls limiting the freedom of the market?
    (c) Due to the larger scale of official intervention in the markets?
    (d) Due to the tightening of guidelines issued by the banks' own management?
    (e) That companies themselves have been forced to become overly protective in foreign exchange by recent changes in accounting standards and to make shorter-term judgments than before?
    (f) That, while the number of participants has increased, the aftermath of Herstatt has substantially reduced the role of smaller banks and organizations and forced them to be little more than "in-and-out" traders?
    (g) That awareness of the increased magnitude of foreign exchange movements in a floating rate world has not only alarmed risk-averters but frightened those who would otherwise be risk-takers?

14. Have futures markets in exchange reduced or increased the volatility of exchange markets?
15. Companies claim to act mainly protectively but is their perception of "protection" always consistent? Or do they tend to adopt a policy and then abandon it under the pressure of events?
16. In your opinion have central banks rendered the better service, from the point of view of the functioning of the markets, when intervening or abstaining?
17. Would you wish to see greater participation/commitment by central banks as a whole?
18. Turning to experience since the measures of November 1st, 1978 have you experienced greater or less difficulties since that time in finding counterparties for transactions?
19. Do you recognize any other practical differences between pre- and post-November 1978 market conditions—in terms, for instances, of the day-to-day volatility, width of quotation and general depth of the market?
20. Have you noticed any change in the attitude of your customers towards covering their exchange risks?

Forward Markets

21. Have floating rates produced more forward business from commercial companies? Or do you think that this business would also have increased markedly under a system of fixed rates?
22. Has *covered* interest rate arbitrage been reduced—because of possibly wider spreads?
23. Or is more interest arbitrage now done on an uncovered basis?
24. Is there more or less anticipation of comparative interest rate movements through forward/forward operations?
25. Or has the development of interest rate futures in certain centres diverted some of this type of business from forward markets?
26. Have floating rates impaired the longer date forward markets, say beyond one year?
27. Have the larger banks concentrated more on the spot markets and would you agree that those smaller banks that specialized in longer date forwards until 1973 have tended to be squeezed out of business? If so, what would you say are the main reasons for such developments?

Costs

28. Considering solely foreign exchange trading profits, and leaving aside foreign exchange earnings from loans and investments, have your trading profits increased in real terms (after taking account of inflation)?
29. If so, would you think that this has been the general experience of banks, once the market had overcome the dramatic losses associated with Herstatt and similar disasters?
30. If your answer to 28. is positive, have the increased earnings been at the expense of customers or central banks?
31. In your view have floating exchange rates increased the costs of international trade and investment in real terms?
32. Have they made any contribution to inflation?

Reports on Answers to the Questionnaire

Structure of the Market

1. Has the number of participants in the market, both banks and corporations, increased markedly since 1973?

London. All respondents (with only a single exception) agreed that the number of bank and corporate participants had increased markedly since 1973 and one respondent said that there had been an increase in regular and not just occasional bank participants. However, some added that the number of active market makers had decreased.

Among the reasons given were that more banks had extended their international networks and that more corporations had established foreign exchange trading departments. Some respondents believed that the number of corporate participants had increased more than the number of bank participants.

Although the number of European banks regularly dealing with London stopped growing or even fell off temporarily after the Herstatt collapse of 1974, that was offset by the entry into the market of more Japanese, far eastern, middle eastern and US regional banks as well as European state and cooperative banks. The growth in the number of bank participants was attributed mainly to the entry into the market of the banks listed above plus the re-entry of those European banks which pulled out for a time after Herstatt.

However, one respondent said the increase in the number of new banks in this market seems to have slowed down since about 1976.

Frankfurt. After a temporary post-Herstatt decline, the number of banks regularly in the German foreign exchange market is reported to have increased, although modestly and largely through an increase in the number of branches dealing in foreign exchange in the case of banks already in the market. (Quite distinct from this trend in the German market itself is the reported increase in the number of German banks which have become active in other foreign exchange centres like Luxembourg, Singapore and Hong Kong.)

Some increase in the number of customers has been reported in the German market since 1973 on the growth of trade, hedging and inward and outward international investment. But several German bankers said that this increase in numbers may not have been as large as in some other centres because about 85 percent of Germany's exports and about half of all imports are invoiced in Deutschemark. The proportions are higher than average at some companies, so that the number of companies needing regular foreign exchange service is thought to be less than in some other countries.

Zurich. A majority of respondents reported no increase in the number of bank participants since 1973 and some went further in saying that a decline in the number of regular bank participants had been offset only partly by a rise in the number of occasional bank participants. However, a majority reported some increase in the number of customers.

Paris. The number of bank and non-bank participants is reported to have risen since 1973.

Tokyo. All banks said that the number of participants had increased, one adding 'tremendously'. The number of banks eligible to participate rose from 129 to 181 from end-1973 to end July, 1979, with the number of brokers rising from 6 to 10. The number of 'market leaders' is put at between 20 and 30.

Singapore. The number of participants has increased, though one respondent qualified this by saying that the number of 'active trading banks' had fallen whilst the number of corporate participants had grown.

New York. All respondents gave a positive answer.

2. Over this period has there been a marked increase or decrease in real terms in the volume of
   (a) interbank business;
   (b) customer business?

The official estimates tabulated in Table I are no more than approximations and it was emphasized in all centres that volume does not expand (or contract) steadily from year to year, but that it rises at times of exchange rate unrest and falls during periods of relative stability.

Volume in *Frankfurt* was especially high in 1973 during the final breakdown of the Smithsonian arrangements and extremely heavy diversification into Deutschemark at that time. It remains higher than in

London partly on continuing international reserve and asset diversification into DM, the greater use of DM than sterling as an international trading and not merely investment currency and the interventions required for the European Monetary System.

Table 1

Daily Average Foreign Exchange Turnover
Spot and Forward
$ billions equivalent

	1973	1979
Frankfurt	19—20	15
London	4—5	10—12
Zurich	5—6	5
Paris	1	3—4

Source: central bank estimates in each centre.

The smaller decline in average daily turnover in *Zurich* between 1973 and 1979 is similarly ascribed partly to the lesser asset diversification into Swiss franc during the latter year, compared with the former, which is due partly, in its turn, to the tighter restraints imposed in 1978 on non-residential investment in Swiss francs.

The considerable rise in *London's* officially estimated daily turnover is ascribed in large part to the growth of the Eurocurrencies market (even though the proportion of that market centred on London was reduced during the 1970s).

The very large increase in the estimated daily average turnover in *Paris* is ascribed partly to an increase in that market's bank and non-bank participants and also to increased intervention within the European Monetary System.

The impressionistic evidence given by bankers in written answers and interviews for this survey do not tally in all cases with the official estimates tabulated above. This may reflect the projection of some banks of their own experience onto their markets as a whole. A summary of their evidence is the following:

London. All respondents reported a marked increase in real terms in the total of foreign exchange turnover since 1973 and a proportionately greater increase in customer than inter-bank business.

However, if one deflates the officially estimated increase in the London market's daily turnover from 1973 to 1979 by, say, a rise of more than 200 percent in world trade prices during that period, then there has at most been a marginal increase in London's real foreign exchange business in the past six years (indeed, on that yardstick there has been a marked increase only in Paris and a considerable real decline in Frankfurt and Zurich). It follows that the experience of some respondents may not have been representative of the market as a whole, i.e. these banks may have increased their share of the market.

A similar reservation applies to the reports of many banks that their customer business had risen more than their inter-bank business, since the proportion of customer and inter-bank business in the market as a whole is not thought to have changed significantly since 1973 on the

Table 2

Inter-Bank Turnover as a Proportion of Total Spot and Forward Turnover, 1979

London	90 percent
Frankfurt	75—90 percent
Zurich	90 percent*
Paris	85—90 percent

Source: central bank estimates.

*In Zurich the proportion is estimated at 80 to 85 percent excluding inter-bank deposit business between Swiss banks, which is conducted through the dollar in the absence of a domestic money market.

Table 3

Proportion of Foreign Exchange Transactions via the Dollar in the First Instance, 1979

London	99 percent
Frankfurt	90 percent
Zurich	95—99 percent
Paris	60*

Source: central bank estimates.

*In Paris, about 15 percent of turnover is in DM, about 10 percent each in Sw.fr. and sterling and the residual 5 percent in other currencies. The proportion going through the $ has declined from about 80 percent in 1970.

official estimates of market structure. As in all foreign exchange centres, a relatively small base of customer business creates a very large volume of offsetting interbank business to match requirements for odd sums and odd forward maturities. The proportion of customer business is bigger at some banks and classes of banks than others, as in the case of a clearing bank which said the proportion of its customer business to total foreign exchange business had risen from 20 to 25 percent between 1973 and 1979.

The increase in total volume reported for London is reported by some banks to have been accompanied also by an increase in the number of transactions; whereas spot transactions of $5 to $10 millions were common before 1973, there was now a greater number in the range of $2 to $3 millions, partly reflecting a greater reluctance of banks to leave positions open overnight.

Frankfurt. Total market volume collapsed after Herstatt and made a partial recovery only from 1978 on the dollar crisis of that year. The decline in business over the six years to 1979, taken as a whole, is reported to have been particularly steep at smaller banks who are no longer able to take positions on the pre-1973 scale, and their business is said to have shrunk in the forward market even more than in the spot.

Non-bank volume is reported to have increased in line with Germany's trade and investment, on more extensive hedging, on the growth of foreign investment by German companies and asset diversification into Deutschemark by non-residents. Nevertheless, on the official estimates there has not been any marked change in the past six years either in the proportion of customer to interbank business nor any significant change in the proportion of total volume going in the first instance through the dollar (the proportion of about 10 percent which does not is represented partly by intervention within the EMS and partly by direct business on the part of some Hamburg banks with Scandinavian currencies and a similarly direct business by some banks in Dusseldorf and Cologne with Benelux currencies).

Zurich. Nearly all banks supported the official estimates of a decline in the money volume of foreign exchange transactions since 1973 and a steep decline in real terms. Nevertheless, a majority of banks report an increase in the proportion of customer business. At 15 to 20 percent of total turnover (excluding inter-bank deposit business transacted through the dollar) this is indeed higher than in other centres.

Paris. A substantial increase was reported here both in inter-bank and customer business.

Tokyo. All respondents said there had been a marked increase in both spot and forward business in real terms. One detailed reply estimated that 'domestic foreign exchange market transactions' had grown 5.3 times in real terms since 1972, after adjustments for changes in export and import prices and in the exchange rate; in particular, the volume of 'swap' transactions rose 11 times in real terms, against a doubling during the previous seven years, under fixed rates. There had been a much more rapid increase in interbank business than customer business, with 'pure market transactions' growing 'conspicuously'.

Singapore. All respondents said that both types had increased, with a much more rapid growth of interbank business. One reported that interbank business had increased by 60 percent p.a. and customer business by 8 percent p.a.

New York. Replies indicated that both types of business had increased, with interbank business possibly again growing more rapidly.

3. If your answer to either part of Question 2 is positive, what would you say are the main reasons for the increase (or decrease)?

Reasons given for the increase in the real volume of foreign exchange business since 1973 include the following:

- The increase in world trade.
- A tendency by some banks to trade more actively in the interbank market to compensate through increased volume for narrowing spreads on business with non-bank customers.
- Increased hedging by companies of currency flows and increased matching of currency assets and liabilities (the latter partly connected with increased borrowing in international and not just domestic financial markets).
- Growth in the number of bank and non-bank market participants.
- Increased hedging and to a lesser extent speculation during times of pressure on a particular currency (i.e., sterling 1976, dollar 1978/79).
- Associated with the above, greater switching of OPEC assets during such periods and asset switching also by central banks outside the Group of Ten industrialized countries.

- Increased intervention by G-10 central banks at times of market instability.
- A growing tendency in some international companies to trade foreign exchange actively for profit (rather than for the more conventional purposes of covering and matching).
- Growth of spot and forward business resulting from increase in international foreign currency lending.

In *London*, unlike some other centres, restrictions on foreign exchange trading were not cited as a market impediment, although exchange control imposed limits on banks' positions after the foreign exchange markets generally reopened in 1951.

Frankfurt. Banks report that temporary increases in volume in disturbed markets result mainly from increased hedging of current transactions and protection of assets by non-bank customers. Inter-bank business then increases partly on the base of enlarged customer business, but partly also by banks seeking the greater profit opportunities offered by wide exchange rate movements.

In Germany, the growth of foreign exchange business has been impeded partly by official constraints and partly by stricter management control within banks since Herstatt. The main official constraint on German banks is that their open positions may not exceed 30 percent of risk capital (equity plus reserves) and brokers may not run positions. Non-banks are not, however, similarly restrained.

Zurich. A majority of banks attributed the decline in inter-bank business since 1973-74 to official restraints reinforced by stricter management control within banks. The effect has been offset only in part by the absence of a money market in Switzerland, which has had the effect of channelling inter-bank deposit business between the country's banks through the dollar.

Tokyo. The increase was attributed above all to the marked increase in Japan's trade and capital transactions, together with the gradual liberalization of exchange control and increased hedging of foreign exchange risks by Japanese companies. A change from the use of outright forwards to a combination of spot and swap transactions for obtaining exchange cover also boosted volume.

Singapore. The reasons most frequently cited, apart from the increase in the number of participants, were the geographical location of Singapore, which made it suitable to act as a link in the emerging "24-hour" global market, and the greater experience of market participants. One comment was that banks now tried to be on top of every situation, to act and react to market news, and that this made for a large turnover.

New York. The growth was attributed to changes in accounting practices (FASB 8), the growth in the number of foreign banks in New York, recycling of OPEC surpluses, and increased hedging by companies.

4. Has the proportion between interbank and customer business changed, and if so in which way?

Answered in (1) and (2) above.

5. Have spreads generally widened, narrowed or remained the same?

All Centres. In the course of interviews, a supplementary question was asked about spreads to non-bank customers.

The number of respondents who said *interbank spreads* had widened was exactly twice the number who said they had narrowed or remained unchanged. However, pressed for amplification, nearly all said that such spreads widened in volatile markets, but narrowed in calmer periods.

Some banks said that *interbank spreads* used to be about 1 point up to 1971; that they widened to around 2 to 3 points in the early 1970s; that they were now commonly 5 points in stable markets, but often 10 points and occasionally as much as 25 points in volatile markets.

A major contribution to the widening of spreads in unsettled markets was said to be made by the temporary withdrawal or partial withdrawal of some banks, especially smaller ones. There was increased reluctance to make a market at such times.

Nevertheless, some banks suggested spreads had widened less than they might otherwise have done because of the greater number of participants and increased competition in the interbank market.

Some banks pointed out that the widening of spreads looks less dramatic when related to the greater movement in spot rates. For instance, the widening of interbank spreads to a range of 5 to 10 points from about 1 point at the start of the 1970s looks modest compared with the increase from about 10 to as much as 200-400 points in daily fluctuations between the beginning of this decade and more recently.

A point made was that the absolute widening of spreads has contributed to a more efficient market, finer shading of quotations being possible within spreads of 10 points on fluctuations of 100 points than had been possible on spreads of 1 point on fluctuations of 10 points. This, in turn, was said to have contributed towards a differentiation of spreads quoted to banks in the market, mainly on the basis of their size, comparable to the differentiation between bid and offered rates quoted to banks of different status in the Eurocurrencies deposit market.

On the related point of *spreads to non-bank* customers, all banks interviewed agreed that these had narrowed considerably in recent years, especially to big customers. One bank described the narrowing as "drastic"; another said, "It is hardly possible for customer margins to shrink any further." The reasons given included:

- increased interbank competition;
- greater customer sophistication, partly resulting from access to more information allowing comparison between bank quotations and active "shopping around" instead of relying, as before, mainly on the customer's own bank's quotations;
- increased awareness by large customers of their bargaining power.

Several banks said international oil companies and other multinationals could get interbank spreads "or even better." The banks added that they were nevertheless ready to deal with the multinationals on those terms for the sake of keeping their business as a whole, even though their foreign exchange business with the multinationals generated minimal profits in itself.

One major international bank made the additional point that it received a "pay-off" from the information acquired through the foreign exchange instructions given it by international oil companies; it believes that the oil companies have special or even privileged access to information, especially when the companies are owned or partly owned by governments, and that this information is reflected in their foreign exchange behaviour.

On the other hand, some banks said they could still make a direct return on foreign exchange business with oil and other multinational companies within interbank spreads, in the same way as they could make a return on normal interbank business. Indeed, one bank welcomed the aggressiveness of multinationals for "sharpening the skill of banks."

One bank alone said it declined to deal with non-bank customers, even international oil companies, at interbank spreads but this was a

merchant bank whose opportunities for oil company business as a whole may be limited.

An unusual insight into the narrow profit margins on foreign exchange business was given in the 1978 report of Bank Julius Bar and Co Ltd, Zurich. The gross return on foreign exchange operations that year was Sw.fr. 8 million and the net return Sw.fr. 5 million on a turnover of Sw.fr. 30 billions, representing, in the bank's words, an "infinitesimal" profit of 1/6th per mille (0.0167 percent). About half the costs of the bank's foreign exchange operations of about Sw.fr. 3 millions were accounted for by telephone, telex and information system costs and the remainder by staff and general overheads. Yet despite narrow margins, foreign exchange trading provided the biggest single source of 1978 profit growth for this bank in a year when the earnings of Swiss banks abroad were held down, after translation into Swiss francs, because of the appreciation of Switzerland's currency against nearly all others, especially the dollar.

6. Have the rapid advances in communications and the instant reporting of news had any significant effect on markets?

All Centres. A distinction was attempted in interviews between *news* (official statements, statistics and the like) and *market quotations* (as through commercial monitor screens).

About three-quarters of the banks questioned thought the wider and quicker dissemination of *news* and *forex quotations* had made a market impact.

The perceived impact in the case of *news* included:

- creation of wider market interest among customers;
- a contribution to the narrowing of non-bank customer margins;
- a greater tendency to put undue weight on individual news items because of the indiscriminate flow of news, described by one respondent as a tendency not merely to react, but to overreact;
- a growing (and often inaccurate) anticipation of news which, spreading as rumour, makes an impact of its own, even if that impact is often short-lived.

Comments on the quicker and wider dissemination of *forex quotations* (essentially by commercial monitor screens) included:

(a) on the *positive* side:

- contributes to a worldwide market (stressed in particular by bankers from Tokyo and Singapore);
- gives smaller banks a better feel of the market;

- gives non-bank customers a better feel too, thus contributing to a finer market (i.e., narrower spreads to non-bank customers);
- has increased information about and awareness of currencies like the Hong Kong dollar and Saudi Riyal and helped promote business in such currencies.

(b) on the *negative* side:

- some banks allegedly use their input merely as advertisement, which can cause ill-feeling when it drives home, more forcefully than might otherwise be the case, that displayed quotations are for guidance only and not firm offers to deal;
- going a step further, some banks deliberately delay updating their inputs to confuse the market about what they themselves are doing; a major international bank almost admitted as much by saying, "When we are busy, updating our display is not a priority."
- going further still, was the allegation that some banks use the screen for deliberate manipulation. A large continental European bank said flatly it had several times done so in the thinner New York market after the European close, pushing up buying prices when it was actually selling.

(c) on a *neutral* level:

- one comment was that the screen was losing its novelty and hence some of its impact.

7. Has the internationalization of broking activity had a significant effect on the markets?

All Centres. The unanimous answer was "yes." The ways in which it was said an impact had been made included:

- widened the market by bringing in new names, including middle eastern, far eastern, smaller European and US regional banks, some of which were previously regarded by major banks as "customers" rather than interbank counterparts;
- contributed through the above to enlargement of the market through more regular participants and greater volume;
- contributed to the emergence of a "24-hour" global market;
- provided another choice to dealing through 'local' brokers—notably in London and New York;

- many banks complained of the erosion of personal relations between banks, which they attributed to the growth of broking (although it might equally be attributed simply to the growth of the foreign exchange market);
- following from the above, some banks complained of the greater risk introduced into the market through the introduction of lesser and relatively unknown names by brokers;
- some banks complained that brokers tried to "push" young dealers into unwise transactions;
- some banks complained that brokers sometimes cause embarrassment by disclosing to one bank the refusal of another to take part in a transaction with it.

8. Do futures markets in exchange, like the International Monetary Market in Chicago, now have a significant influence on world markets, and if so in what way?

All Centres. Most respondents said that futures markets like the IMM had a destabilizing effect, but many described it as a limited one. Points made included:

- some banks know when the IMM itself is running up against its credit lines from banks and can then anticipate wider fluctuations in IMM quotations;
- a minority view was the IMM has an unsettling influence on some exchange rates rather than all and that its impact is correspondingly less on centres where a larger spread of currencies is dealt (this view was expressed in Paris, where the proportion of total transactions through the dollar is considerably less than in other European centres);
- the impact of the futures markets on spot rates was plainly still much less than of the forward markets;
- the main impact of the futures markets is in the thinner US markets which exist after the European close;
- that impact (above) is therefore sometimes an exaggerated one, but it is often also short-lived;
- the impact is usually one way, reinforcing but not reversing existing trends;
- In some centres, the undue influence attributed to the IMM has become a subject of discussion between the central bank and commercial banks although, as yet, without clear result;

- nevertheless, some bankers believe the influence of futures markets may grow, especially when their workings become better understood in Europe and Asia than is alleged to be the case now;
- contrary to the majority opinion which plays down the present impact of futures market, some bankers point out that the IMM already has had an influence on settlement dates for sterling, Canadian dollars and Deutschemark forward contracts.

Behavior of the Market

9. Allowing for the fact that in recent years leading economies have diverged more markedly, do you consider that exchange markets have been reasonably accurate in determining short or medium-term trends for the exchange rates of leading currencies?

10. Alternatively, do you think that markets overreact to changing circumstances and move exchange rates far beyond underlying equilibrium levels, i.e. to overshoot, and contribute in the process to the divergence among economies?

All European and American Centres. A large majority of respondents thought the markets reasonably accurate in determining medium-term trends, but almost all of them thought the markets overshoot in the short run. The observations made include:

- as in nearly all markets, at times of extreme rate volatility professionals tend to be overwhelmed by amateurs, at least temporarily, at which point the professionals abandon their view and concentrate instead on guessing what the amateurs are going to do;
- the equilibriating influence of speculators and buffer stocks (i.e., central banks) is thought to be limited (see answers to questions 11, 16 and 17);
- nevertheless, several bankers said they thought the market had done better in moving towards equilibrium relationships than was possible in the latter days of the pegged system. One banker said that "natural cynicism" had produced more realistic markets than "political optimism";
- several bankers took the view that market distortions did not last long enough to do harm, and certainly did less harm than official attempts to maintain "wrong" rates;
- None of the respondents claimed that short-term over and under-shooting contributed to economic disequilibrium. On the contrary, the point was made that extreme fluctuations occurred only when governments had failed to adjust and that the market's reaction helped to force necessary adjustment, thus

contributing to more stable conditions. The British government's reaction to the 1976 sterling crisis and the official American reaction to the 1978 dollar crisis were cited as examples.

Tokyo. Most respondents said that in the short term (from one to three months) markets have not been 'accurate' but that, over the longer term (six months to a year), they have been.

Some thought that overshooting might have contributed to divergencies between economies but another view was that in the medium to long term the markets will 'without fail' move the rate to an equilibrium level, unless the rate is artificially manipulated.

Singapore. Respondents thought that the markets had been reasonably 'accurate' in determining medium-term trends; and one even maintained they were 'accurate' in the short term as well.

All respondents took the view that volatile rates have not contributed to divergencies between economies.

11. What has been the role of speculation in the markets? Is there any evidence that the speculator has played his "textbook" role of damping down movements in exchange rates? Or has speculation on balance added to such movements?

All Centres. The consensus among respondents is that the speculator, narrowly defined, does not play his classical equilibriating role by having become too small in relation to the market's size to do so; and that the larger volume of asset switching, leading and lagging adds to exchange market volatility, at least in the short run. It was notable that respondents in New York emphasized the "disruptive" influence of speculation.

The answers to this question are linked to the answers given to questions 9 and 10 and to questions 16 and 17 on central bank intervention.

Observations about *speculation* include:

- to the extent that pure speculation plays a part, it nowadays does so increasingly through futures markets like the IMM;
- officially and self-imposed limits on the open positions of banks since Herstatt have reduced speculation by some banks (though others said that the profits recorded by some other banks could only reflect successful speculative activity);
- pure speculation by banks and non-banks (in the sense of uncovered forward sales unrelated to trade or capital transactions) is limited by foreign exchange controls in many countries, though there are ways to circumvent these;

- such speculation is believed to have fallen off, also, as a result of large losses in the past, which are believed to have done more to scare speculators than large profits have done to encourage them;
- uncertainty about what an 'equilibrium' rate for a currency might be has increased;
- the size and unpredictability of central bank intervention is likewise believed to have diminished private speculation, except when the market is one-way and the direction of intervention predictable;
- the belief that speculation has diminished or at least failed to expand in line with the market's growth explains the belief of most respondents that speculation has become too marginal to perform its classical role in this market.

Along with the diminished role of stabilizing speculation, many bankers believe that *asset switching* has been a further destabilizing influence, especially switching by large holders, as in the OPEC countries. In many cases, dollars sold in the course of asset diversification by authorities and other large holders outside the Group of Ten end directly or through commercial banks with the central banks of the G-10.

A destabilizing influence is attributed by many bankers, also, to *leading and lagging* of trade payments. One banker claimed to have been told by a central bank that such leading and lagging against the dollar had built up to $120 billions by October, 1978. This may be true or otherwise, but it seems significant that a well-placed individual believes it to have been true.

On the other hand, some respondents said that even leading and lagging of trade payments had fallen off in recent years following losses incurred by some companies on uncovered positions.

From *Japan*, too, bankers said that speculation in the Tokyo market itself was limited, owing to the close degree of official control. Referring to the role of speculation in general, one respondent said that it had tended to restore equilibrium in the long run; another that it did so only at times when there were a variety of views on the market about a certain exchange rate; another that the kind of speculation prevalent recently brought about abrupt movements in rates. From *Singapore*, however, one bank said that speculation had added depth to the market and had been responsible for initiating the movement of currencies towards equilibrium levels.

Although the answers to this question suggest that most bankers now think that speculation plays a limited or declining role in contributing towards market equilibrium, the final point made in response to questions 9 and 10, above, seems far more persuasive in suggesting that speculation does in fact contribute to medium-term equilibrium by the very extremes of short-term movements which help to force economic adjustment sooner than it might otherwise have been undertaken by governments wishing to give priority to other policy objectives.

12. Have markets on balance gained or lost in terms of their breadth, depth and resilience?

All Centres. As defined in interviews, the answers to this question were:

breadth (a wider spectrum of participants, currencies and available transactions spot and forward): a large majority thought the market has *gained breadth* in those terms;

depth (the market's ability to absorb large transactions without undue price movement): *opinions varied* from centre to centre;

resilience (the market's ability to recover quickly from a price distortion resulting from an exceptionally large trade): a majority said that the market has *gained resilience* on that definition.

The market's greater resilience is attributed partly to its greater breadth. Several explanations were offered (and qualifications made) by those who said that the markets had lost *depth*—a view taken by London bankers in particular:

- the speculator's allegedly diminished role is said to have made some contribution to the perceived loss of depth;
- although the market no longer has the "exaggerated" depth of the pre-Herstatt days ("when a small bank in Germany could come in for $50 millions"), there has been some recovery since that shock to more "sober" levels of depth;
- officially and self-imposed limits on banks' open positions are likewise said to have contributed to lesser depth;
- the amount of depth in the market is said to vary; larger trades are said to be possible at the start of a day than later, especially if there has been central bank intervention between those times;

- the depth of the market is said to vary also in another way, existing to a greater degree at times of calm, but not in volatile markets "when you most need it";
- a marginal contribution to the market's alleged lack of depth, or sufficient depth, is attributed to the necessarily limited discretion given to foreign exchange dealers whose growth in numbers is said not to have been matched as yet by growth in experience and skills.*

On the other hand bankers in Tokyo and Singapore reported that their markets had gained in all three respects.

13. If in your opinion the markets have lost efficiency in recent years, what would you say are the main reasons for this? Is it:
    (a) Due to the intensification of supervision or regulation of banking by central banks and other supervisory bodies?
    (b) Due to the maintenance or intensification of exchange controls limiting the freedom of the market?
    (c) Due to the larger scale of official intervention in the markets?
    (d) Due to the tightening of guidelines issued by the banks' own management?
    (e) That companies themselves have been forced to become overly protective in foreign exchange by recent changes in accounting standards and to make shorter-term judgments than before?
    (f) That, while the number of participants has increased, the aftermath of Herstatt has substantially reduced the role of smaller banks and organizations and forced them to be little more than "in-and-out" traders?
    (g) That awareness of the increased magnitude of foreign exchange movements in a floating rate world has not only alarmed risk-averters but frightened those who would otherwise be risk-takers?

Nearly all Centres. A majority of respondents in New York, London, Frankfurt, Zurich and the Far East centres do not think that the market has lost efficiency in recent years (the question begged here), although nearly all thought that the markets overshoot in the short term. The answers from Paris, New York and the Far East are not included because the sample of banks providing full replies was too small; those New York banks which were interviewed stressed in particular factors (b) and (e). The following table summarizes responses:

*An illustration of the growth of the foreign exchange community in London was given by a banker who recalled that a City public house sufficed for the community's Christmas party in the early 1960s, but that it has now become necessary to use the Festival Hall for that function.

Table 4

Exchange Market's Efficiency

	Lost Efficiency Because of:	No Loss of Efficiency Because of:
a.	Z	L, F
b.	F	L, Z
c.	F	L, Z
d.	Z	L, F
e.	—	L, F, Z
f.	—	L, F, Z
g.	L, F	Z

Note. The symbols L (London), F (Frankfurt) and Z (Zurich) are used to indicate a majority answer from those centres under each head.

14. Have futures markets in exchange reduced or increased the volatility of exchange markets?

All Centres. The consensus view is that the futures market have increased exchange rate volatility. Beyond that, the answers to this questions were those reported for Question 8.

15. Companies claim to act mainly protectively but is their perception of "protection" always consistent? Or do they tend to adopt a policy and then abandon it under the pressure of events?

All Centres. Nearly all respondents said that companies act inconsistently, but not all bankers criticized them for doing so. Changing policies according to circumstances was not necessarily inconsistent, said one banker. Another went further, saying that companies with policies of selective hedging were in fact following a consistent approach.

Some bankers said that smaller companies followed consistent hedging policies in more cases than larger companies, who tend to have a flexible approach. Companies adopting a flexible approach are sometimes proved right, but are often wrong, according to some bankers, although they added that such companies are gaining experience and improving their performance.

As against the above, several bankers said there had recently been an increase in the number of companies covering regularly or at least very often, partly because of losses incurred in the past and partly in response to the requirements of FASB 8.

Nevertheless, companies do revert to uncovered leading and lagging when markets seem to be moving firmly one way—for instance, some UK firms importing from the US and Japan were lagging dollar and yen payments during the spring and much of the summer of 1979.

A few international companies were reported as speculating regularly and actively for profit, "in some cases to disguise the inefficiency of their manufacturing base," according to one banker.

Respondents in *Tokyo* thought that companies there had taken an increasingly 'positive and flexible' posture towards the exchange rate, with the aim not so much of protecting as of maximizing their earnings. Some major trading companies and manufacturing companies believe that they lead the market, if only indirectly. The most skillful operators are believed to be the large trading companies.

In *Singapore*, companies were thought to behave inconsistently, in the sense (as one respondent put it) that 'protection' can turn into 'aggression' in certain circumstances; e.g. during times of pressure on the dollar.

In summary, the evidence suggests that there is no approach common to all companies, but that selective hedging is very widespread, especially among large international firms.

16. In your opinion have central banks rendered the better service, from the point of view of the functioning of the markets, when intervening or abstaining?

17. Would you wish to see greater participation/commitment by central banks as a whole?

What emerges most clearly from the answers to these two questions is that a majority of UK, German and Swiss banks who answered expressed themselves dissatisfied with the way in which central banks intervene. Consequently they expressed a wish for increased intervention only if the manner of it were improved. Several bankers in Singapore took the extreme view that central banks should abstain from intervention. Respondents from New York and Tokyo were inclined to take a more favorable view of intervention practices.

Some respondents attributed their dissatisfaction to incompatability of national policies, of which central banks are merely agents.

However, several bankers in the three European centres alleged technical incompetence by central banks accusing them, among other things, of being "inconsistent," "unprofessional" and poor at "reading the market." Some bankers saw central banks as taking over the speculator's classical role; but among those who thought this there were some banks which said that central banks performed that function "inefficiently," adding to the volatility rather than smoothing disorderly markets.

As an example, the foreign exchange director of the London branch of one of the world's biggest banks said that on one occasion in 1978, the Bundesbank had ostentatiously bought $30 million at a morning fixing and then quietly sold $200 millions through the market in the afternoon. A continental European banker independently made the same accusation and a central banker said that the charge "might well be true." As remarked earlier in another context, what is significant here is not so much the accuracy or inaccuracy of the story; the significance is that some well placed market participants believed the story to be true or at least possibly true, and that itself is a comment on market perceptions.

In interviews it was alleged, also, that central banks sometimes intervene at the wrong moments and the wrong amounts to achieve their presumed object of stabilization.

On the other hand, several bankers observed that the volatility they alleged central banks have added to the market have helped their banks' profits (and the answers to Question 30 show that many respondents claim to have profited more from dealings with central banks than with customers).

Nevertheless, the complaint was made that some banks had allegedly "privileged" access to their central banks and made "unfair" profits as a result. Nevertheless, several banks urged increased consultation between central banks and leading market makers to improve the effectiveness of official intervention even though that might lead to more complaints about "privileged" access, as reported above.

One answer made by central bankers to the criticisms reported above is that their entry into the foreign exchange markets does not invariably represent intervention; in many cases central banks were merely acting on the instructions of their domestic and foreign customers in the same way as commercial banks.

Central banks interviewed had an answer also to the suggestion that they could best stabilize markets in the classical speculator's way by

buying low and selling high for a consistent profit over time. Part of the answer was that central banks are obliged to consider the influence of their actions on their economies as a whole and that they are obliged also to take into account the impact of foreign exchange movements on the value of their foreign currency reserves. Besides that, a central banker pointed out: "If we acted commercially and consistently made foreign exchange profits using our advance, inside information, say of credit policy, commercial banks would be the first to object."

At another level, it was pointed out that central bank cooperation has become closer, especially since 1972 through the "concertation" that takes place four times a day between the central banks of the European Community's member countries plus Switzerland, Sweden and Norway. The first of these daily "concertations" is at 9:30 am European time and the last at 3:35 pm. The central banks taking part inform their counterparts of net changes in their foreign exchange assets on the previous day and the reasons for those changes. The position of leader of the "concertation" changes daily, and the leader exchanges information at the end of each day with the central banks of the US, Canada and Japan. The "concertation" is conducted over specially secured and continuously open telephone lines.

As against the criticisms made of central banks, it is fair to add that two banks, one in London and another in continental Europe, singled out the Bank of England for special praise. Several banks in Switzerland said they welcomed an improvement of communications with the Swiss National Bank; previously they were often obliged to queue when trying to reach their central bank, while the central bank on its side was said to have dealt only with one of the major Swiss banks at a time. Now, however, there are direct lines between the Swiss National Bank and the large Swiss commercial banks allowing a continuous dialogue which, according to banks in Zurich, gives each side a better "feel" of the other. The Banque de France, meanwhile, has direct lines to 20 banks and the Bourse (though not to brokers).

In addition, several continental European bankers praised the improved coordination between the authorities in Zurich and Frankfurt adding, however, that the coordination with the Federal Reserve Bank of New York was less effective because of the Fed's alleged information gap caused by the "isolation" of the US markets. Some bankers in New York, however, said that the Fed had significantly improved its market expertise and intervention techniques in recent years.

18. Turning to experience since the measures of November 1st, 1978 have you experienced greater or less difficulties since that date in finding counter-parties for transactions?

19. Do you recognize any other practical differences between pre- and post-November 1978 market conditions—in terms, for instance, of the day-to-day volatility, width of quotation and general depth of the market?

20. Have you noticed any change in the attitude of your customers towards covering their exchange risks?

All Centres. A majority of respondents said they could not trace significant market changes narrowly to those November's measures alone, excepting for the "improvement" in central bank strategy reported above. One banker said the November measures had reminded the market of the ability of governments to act on a "startling" scale.

Several bankers remarked on greater caution and more covering by business customers. But they attributed this only partly to the November's package and some reported that even the marginal effects of that package had worn off by September, 1979.

A greater influence on markets was attributed to world events like the Iranian revolution, the ensuing further rise in oil prices, the uncertainties created in the middle east and beyond by the Israeli-Egyptian treaty in March and (on a very much lesser scale) the uncertainties created by the European Monetary System.

Forward Markets

21. Have floating rates produced more forward business from commercial companies? Or do you think that this business would also have increased markedly under a system of fixed rates?

All Centres. Most respondents reported an increase in forward business from commercial companies since floating, and at least one bank reported a "notable" increase. However, a very important qualification is that the increase was attributed by several banks to exchange rate instability, rather than floating in itself. Even under the pegged system, forward covering increased whenever exchange relationships came under threat or pressure; and under floating there is some falling off in the business during periods of exchange rate stability.

22. Has *covered* interest rate arbitrage been reduced—because of possibly wider spreads?

23. Or is more interest arbitrage now done on an uncovered basis?

All Centres. A majority of banks who answered these two questions said that covered interest arbitrage had remained about the same or risen slightly, and the same proportion reported no increase in uncovered interest arbitrage.

Bankers in *Frankfurt* and *Zurich* said forward spreads had not in fact widened. Despite that, some banks in Germany said they had stepped up uncovered interest arbitrage to compensate for narrower spreads on their international medium-term loans, running uncovered dollar positions in the Cayman Islands, where the dollar ranks as domestic currency and where dollar positions are not therefore subject to the limitations on forward positions in foreign currencies applying to banks in Germany.

24. Is there more or less anticipation of comparative interest rate movements through forward/forward operations?

A majority of banks in *Frankfurt* and *Zurich* reported an increase in forward/forward business and in some cases a substantial increase. One bank said that the increase in forward/forward positions resulted from the reduction of opportunities for classical arbitrage. Another said that a large part of forward business from customers was not at standardized maturities and that this obliged banks to take forward/forward positions. It was said also that large movements in spot exchange rates provoked the reaction of large interest rate changes, thus creating greater opportunities for forward/forward specialization (although, presumably, greater risks too).

Just under half the respondents in *London*, however, said floating had reduced anticipation of comparative interest trends through forward/forwards, about an equal number said the opposite and a minority said they had detected no change or that they were unable to answer. One bank said the number of such transactions had not grown although the amounts had. Some banks which reported an increase said that it had been only slight. One of those which reported a decrease in this type of activity attributed it partly to greater risks and closer management control.

25. Or has the development of interest rate futures in certain centres diverted some of this type of business from forward markets?

All Centres. Only a small minority of respondents said yes; the majority said no, or that they did not know. Those who reported some diversion said it had been small. Several banks said there had been no noticeable diversion yet suggested nevertheless that there might be in the future, if the business of futures markets developed further and became better known.

One bank made the point that if one were thinking, for instance, of the forward U.S. Treasury bill market, the participants are not the same as those in the traditional forward foreign exchange or the Eurocurrencies markets, at least as yet.

26. Have floating rates impaired the longer date forward markets, say beyond one year?

27. Have the larger banks concentrated more on the spot markets and would you agree that those smaller banks that specialized in longer date forwards until 1973 have tended to be squeezed out of business? If so, what would you say are the main reasons for such developments?

London. Two out of three respondents said the market for longer dated forwards had been impaired, but post-Herstatt rather than post-floating. This was linked to the answers to question 27; there was unanimous agreement that the bigger banks concentrate on the spot markets and that the smaller banks specializing in longer dated forwards had found their ability to do so impaired, even though they had not necessarily been squeezed out of the business. Longer dated forwards in some currencies are still obtainable for 5 and even 10 years, but not easily and only in limited amounts.

The reasons given included:

- while banks' own limits on spot and shorter forward transactions have generally been reinstated to pre-Herstatt levels, limits on longer dated forwards have not been similarly relaxed;
- Some greater caution has persisted since Herstatt about the acceptability of the names of smaller banks generally, including those specializing in longer dated forwards;
- the expansion in the capital base of many smaller banks has not been sufficient for an increase or even maintenance of longer dated forward business (or, alternatively, they have chosen not to use an enlarged capital base as backing for this particular activity);

- smaller banks have been reluctant to use credit lines with other banks for an expansion or maintenance of longer dated forward business.

In *Frankfurt*, *Zurich* and *Paris* the long-dated forward market has not been the speciality of smaller banks to the same extent as in London, partly because larger banks have included this specialization in their services to help finance exports of capital goods. So, although some smaller banks have been squeezed out of this market for the same reasons as given in London, the market has been less impaired by their withdrawal. Nevertheless, banks in Frankfurt and Zurich reported that this business had grown very little in relation to inflation and their other business, although in the case of German banks some of this business has been shifted from Germany to Luxembourg and London because of the backing afforded by the inter-bank foreign currency deposit markets for Deutschemark in Luxembourg and dollars in London.

Costs

28. Considering solely foreign exchange trading profits, and leaving aside foreign exchange earnings from loans and investments, have your trading profits increased in real terms (after taking account of inflation)?

29. If so, would you think that this has been the general experience of banks, once the market had overcome the dramatic losses associated with Herstatt and similar disasters?

All Centres. A majority reported an increase in their own profits; about half of them guessed that this has been the experience of other banks too, but the other half declined to express an opinion on that point.

However, all the banks which reported an increase in their real foreign exchange trading profits said it had been less than the increase in the real volume of foreign exchange trading since 1973, and several said it had been considerably less.* One bank observed that the overall increase in forex profits had been achieved despite a decline in the profitability of its forward trading since 1973.

Another point made was that while profits have tended to be higher in moving markets, so have risks and, in some cases, losses. Several banks ("other banks" in all cases) were said to have lost money in the markets of 1974 and 1978.

*An illustration of very narrow foreign exchange trading profits on extremely high volume has already been given in the reference to the 1978 report of Bank Julius Bar.

A major international bank in London said it was uncertain whether the growth in real foreign exchange profitability could be relied on, at least at the pace of many recent years, because of the narrowing of margins to non-bank customers. Indeed, several banks pointed out there had been no steady trend in foreign exchange profits, which have tended to vary from year to year.

30. If your answer to 28 is positive, have the increased earnings been at the expense of customers or central banks?

Many banks (13) declined to answer this question, at least in writing; of those that did, ten said that increased earnings had been at the expense of central banks, four that they had been at the expense of both central banks and customers, and nine gave other replies.

Slightly more than a third of those who answered in *London* said the greater increase in foreign exchange profits had been on dealings with central banks; others said that it had been greater on dealings with non-bank customers or gave no clear answer.

One bank, however, actually quantified its answer, saying 80 percent of its foreign exchange profit growth since 1973 had been on transactions with central banks.

Several banks acknowledged that central banks were not in the business "mainly for profits"; that they often intervened for political reasons on instructions from their governments; but said that they did even that ineptly (in the view of some banks, as reported in the answers to questions 16 and 17).

Another bank observed that profits from central banks and customers were small in relation to those it made from taking spot and forward positions.

In *continental European centres* only a minority of banks claimed to have profited more from central banks than customers, a large bank in Frankfurt saying that central banks had, on the contrary, tended to be on the "winning side" since November, 1978. Another bank in Frankfurt said its foreign exchange profits came mostly from intensive arbitrage so that it was difficult to pin the "cost" of such profits on any single counterpart or class of counterparts. The latter point may have been a reason why many banks did not answer this question.

A majority of bankers in *New York* and the *Far East,* however, said that increased earnings had accrued, at least in part, from central banks.

31. In your view have floating exchange rates increased the costs of international trade and investment in real terms?

32. Have they made any contribution to inflation?

All Centres. A majority answered these two questions by saying yes, but minimally; "marginal compared with other engines of inflation" was one comment.

It was pointed out that companies do include the higher costs of more extensive foreign exchange cover (or risk) in their prices, whenever they are able; and that their readiness to increase export prices on a downward movement of their own exchange rate is not always matched by an equal readiness to reduce or even maintain export prices on an appreciation of their own exchange rate.

One respondent made the point that it was impossible to answer what "would have happened" under different circumstances, but added that matters would probably not have been very different under pegged but unstable rates than they have been under floating rates.

Survey of Market Opinion

2. The Survey of Industrial Corporations

The questionnaire reproduced below was mailed in July to selected major international corporations in the USA, Germany, France, the United Kingdom and Switzerland. Reports on the answers follow.

Questionnaire for Industrial Corporations

The following questions are designed to determine how floating exchange rates actually have affected the level of, costs of, and approach to international economic activity. The objective is to understand better the consequences of floating exchange rates; it is not to solicit preferences for the current regime versus the Bretton Woods system. Unless otherwise indicated, for each of the following questions, compare and contrast the current posture of your firm with that prevailing when most rates of exchange were fixed. As applicable, distinguish in your responses between floating rates *qua* floating rates and the highly volatile movements experienced over the past few years.

Policy

1. With floating exchange rates how has your firm's philosophy changed with respect to:
   (i) cash management;
   (ii) decisions regarding short-term portfolio investments;
   (iii) the principles employed in evaluating options to finance foreign operations;
   (iv) the attractiveness of investment abroad?
2. Has a formal statement concerning foreign exchange risks and opportunities been adopted by the firm? If one has, please attach a copy.
3. Has the firm become more or less averse to foreign exchange risks?

Management

1. Has responsibility for foreign exchange decisions become more centralized? If so, has the responsibility for other financial functions, e.g. cash and portfolio management, also become more centralized?
2. What is the relevant time horizon for foreign exchange decisions? Has it become longer or shorter? Is there heightened concern about the effects of foreign exchange fluctuations on reported interim financial results?
3. Does the firm distinguish between the translation and the cash flow effects of foreign exchange movements?
4. How are foreign exchange considerations reflected in project economics when evaluating an investment in another country?
5. How do you believe the financial community, i.e. commercial, merchant, and investment bankers, the investing public, professional portfolio managers, and the press, view the reported foreign exchange gains and losses of a firm?

Financial Strategy

1. Are floating exchange rates deemed by your management to represent a material new element of risk to international (i) trade and (ii) investment?
2. Have floating exchange rates resulted in the elimination, deferral, or reduction of any foreign direct investments?
3. Have floating rates rendered international trade more or less attractive? Have they, in fact, influenced the level of your international trade?
4. Have floating exchange rates raised the cost of conducting business internationally? If they have, in what ways and how is this increase measured?
5. Have your prices been raised to cover the incremental expenses of managing foreign exchange positions and hedging?
6. What factors are relevant when selecting the currency of borrowing?
7. Have you increased or decreased your borrowing of foreign currencies? Have you become less or more willing to borrow foreign currencies long-term?
8. Regarding the currency of denomination for sales to (i) affiliates and (ii) third parties,
   (a) What factors are relevant in selecting the currency?
   (b) What percentage of your exports and imports are denominated in the currency of (i) your home country, (ii) the importer's country, and (iii) another one (Specify the most important one[s])? To what extent has the currency of denomination for international trade changed over the past six years?
   (c) Some academicians argue the currency of denomination is irrelevant because market forces will preclude any supplier or customer from using this aspect of a contract to extract a consistent gain over time. Do you agree or disagree; why?
9. With floating exchange rates, capital and trade controls should be both less prevalent and less restrictive. Has this been your experience or do restrictions continue to inhibit the free flow of money and goods?
10. Have you, as a result of floating exchange rates, taken any decisions to achieve a desired accounting result and sacrificed an economic gain?

11. What new tools, devices, and techniques in international finance have developed in the last few years?
    Do you use more frequently today some of the financial techniques e.g. swaps, parallel loans, leading and lagging etc. which predate the collapse of fixed foreign exchange rates?
12. What economic and other factors are considered when forecasting foreign exchange rate movements?
13. Are the foreign exchange markets "efficient," i.e. the price of a currency at any time reflects the combined knowledge of market participants and is a good estimate of its intrinsic value?
14. Do you believe you (or your advisors) can consistently predict future foreign exchange rate movements more accurately than "the market"?

Reports on Answers to the Questionnaire

Policies

1. With floating exchange rates how has your firm's philosophy changed with respect to:
   (i) cash management;
   (ii) decisions regarding short-term portfolio investments;
   (iii) the principles employed in evaluating options to finance foreign operations;
   (iv) the attractiveness of investment abroad?

While responses varied, it was generally agreed that floating rates have led corporations to become more sensitive to the effect of currency movements, particularly on their *short-term* financial operations. About half of the respondents said that their philosophy toward cash management and short-term portfolio investments had changed as a result of the volatility of exchange rates and the changing structure of the international capital markets. Foreign exchange considerations were taking an increasing amount of management time International financial management had improved substantially with the growth in the number of experienced personnel and more sophisticated equipment.

Those respondents who believed that floating rates had not changed their philosophy toward cash management neverthelesss felt that floating rates had altered the pattern of their short-term portfolio investments, which had become more biased toward the Eurocurrency market. For some respondents, foreign exchange considerations had become the dominant factor when making portfolio investment decisions; relative rates of interest had assumed a secondary role.

Few respondents felt that their approach to the finance of foreign operations had been significantly changed by floating rates though there appears to be a greater emphasis on local currency financing, as well as more activing leading and lagging of trade payments, and selective hedging of foreign exchange exposure.

Respondents agreed unanimously that overseas investment policy had not been significantly affected by the advent of floating rates. Those respondents in the petroleum industry commented that floating rates had had a relatively minor effect on investment abroad because the oil industry remains dollar-based. One American respondent stated that the attractiveness of foreign direct investment had declined as the dollar weakened and as manufacturing costs (in dollar terms) in other industrial countries rose above those in the U.S.

2. Has a formal statement concerning foreign exchange risks and opportunities been adopted by the firm?

Fewer than half of the respondents have adopted formal statements on foreign exchange management. Those corporations without formal statements have policy guidelines for the corporate or financial officers responsible for foreign exchange transactions.

3. Has the firm become more or less averse to foreign exchange risks?

Some respondents stated no change in their attitude toward this type of risk but a small majority said they had become more averse, especially for the short term in which there is much greater exposure to volatile fluctuations.

Management

1. Has responsibility for foreign exchange decisions become more centralized? If so, has the responsibility for other financing functions, e.g. cash and portfolio management, also become centralized?

A number of firms have for some time centralized responsibility for foreign exchange and portfolio management in headquarters. To the extent that foreign affiliates had a measure of discretion in the past, there is a tendency toward centralizing certain financial functions. Complementing this trend, there also has been a movement toward greater consolidation of international treasury functions.

2. What is the relevant time horizon for foreign exchange decisions? Has it become shorter or longer? Is there heightened concern about the effects of foreign exchange fluctuations on reported interim results?

Most respondents stated that their planning horizons for transactions purposes have become shortened as a consequence of the increasing unpredictability of exchange rates. All American companies reported increased concern, or at least awareness, about the effects of foreign exchange fluctuations on reported interim results.

3. Does the firm distinguish between the translation and the cash flow effects of foreign exchange movements?

All firms differentiate between economic exposure and translation exposure. Differences arose between the strategies each respondent employed to manage cash and translation exposures. One respondent reported that forecasts are made "to anticipate future exposures of both a translation and cash flow nature," after which an evaluation is made of the effect of cash flow hedging decisions on translation exposure. Respondents regarded actual cash losses as more serious than translation losses. Nonetheless, two U.S. respondents suggested that under certain conditions they have been willing to "risk cash losses in order to offset potential translation fluctuations."

4. How are foreign exchange considerations reflected in project economics when evaluating an investment in another country?

Most respondents agreed that foreign exchange assumptions are an integral part of long-term project economics. Other things being equal, the sensitivity of the project to various exchange rate assumptions is evaluated against profitability, cash flow, and other financial measures in both home and local currency terms.

One respondent suggested that the risks inherent in foreign investment (of which foreign exchange is just one) required higher *premia* which should be reflected in more stringent investment criteria or higher hurdle rates for international projects. Also, respondents frequently

mentioned the importance of assessing the effects of various foreign exchange restrictions on investment flows.

The evaluation of an investment project solely in terms of local currency was suggested by only one respondent. The same respondent commented that floating rates have contributed to a distortion in the pattern of their investment.

5. How do you believe the financial community, i.e. commercial, merchant and investment bankers, the investing public, professional portfolio managers and the press view the reported foreign exchange gains and losses of a firm?

Nearly all respondents felt that there was a great deal of confusion about the significance of foreign exchange transactions. Many respondents trace part of the lack of public understanding to the press. Abnormally large gains or losses, often related to currency fluctuations rather than business decisions or speculative behavior, frequently attract attention in the media.

Financial Strategy

1. Are floating exchange rates deemed by your management to represent a material new element of risk to international (i) trade and (ii) investment?

There was strong agreement among respondents on this question. Although floating rates had added a "new dimension" of risk (or uncertainty) to both trade and investment, few deemed the added risk to be material and in either case it was the volatility which was constantly reiterated as the damaging element, rather than floating rates per se.

One respondent bluntly stated that "sudden changes during the fixed rate era represented a more risky environment than the more or less smooth movements in today's system."

A particularly significant result was that, on the issue of investment, the larger degree of perceived risk had not, in the opinion of respondents, actually discouraged foreign investment.

2. Have floating exchange rates resulted in the elimination, deferral, or reduction of any foreign direct investments?

All respondents answered in the negative; floating rates had *not* led corporations to abandon or reduce foreign direct investment.

3. Have floating rates rendered international trade more or less attractive? Have they, in fact, influenced the level of your international trade?

Respondents believed that floating rates had had a negligible impact on the level of their foreign trade.

4. Have floating rates raised the cost of conducting business internationally? If so, in what ways and how is this increase measured?

The general view was that floating rates had not appreciably raised the costs of conducting business internationally. Some respondents who took this view added qualifications, however. One said that they had altered the pattern of costs and made them, to some extent, more volatile, another that they had probably raised costs in the short run, in view of the need to protect exposures—but that on the premise that exchange markets would have experienced even larger one-time adjustments without floating rates, the cost had probably not increased materially.

A minority took the view that costs had increased, the main factor being the cost of increased hedging. One respondent from Germany said that as a company based in a hard currency country the cost had definitely increased, though the increase could not be measured greatly. Another multinational corporation, based in the United Kingdom, said that the only costs involved had been in setting up and staffing an exposure management team and the greater management time devoted to foreign exchange matters. But again, the latter was probably more related to exchange rate volatility than to floating rates.

5. Have your prices been raised to cover the incremental expense of managing foreign exchange positions and hedging?

Most replies were in the negative. This result should, however, be interpreted with care, in view of the impression given by replies to other questions that hedging of foreign exchange exposure is a much more widespread practice than was the case before the advent of floating rates. Indeed, several respondents began their reply by stating that the cost of forward cover is a part of normal business costs, before going on to say that prices are determined by competitive conditions in the relevant markets.

6. What factors are relevant when selecting the currency of borrowing?

"Primarily cost on an all-in basis: that is to say, interest plus exchange risk." This reply from a UK-based multinational reflected the view of the majority of respondents. One said that they would include

the aftertax cost of forward cover "unless the currency was considered to be chronically weak." Some said that they tried to match currency liabilities and assets, but the general impression given in the interviews was that many corporations only pay lip-service to this concept. During the past dozen years, exchange-rate movements have nearly always overwhelmed the interest-rate differentials between appreciating and depreciating currencies. As a result, many companies now attempt to finance international investment, whenever possible, in weak currencies, inhibited only partly by taxation of exchange-rate gains, where applicable.

7. Have you increased or decreased your borrowing of foreign currencies? Have you become less or more willing to borrow foreign currencies long-term?

Most US corporations said they had reduced their borrowing of foreign currencies, especially long-term. Respondents in strong-currency countries said they had become more willing to borrow abroad, both short and long term. Many added that their decisions had not been affected by floating exchange rates.

8. Regarding the currency of denomination for sales to (i) affiliates and (ii) third parties,

(a) What factors are relevant in selecting the currency?
(b) What percentage of your exports and imports are denominated in the currency of (i) your home country, (ii) the importer's county, and (iii) another one (Specify the most important one[s])? To what extent has the currency of denomination for international trade changed over the past six years?
(c) Some academicians argue the currency of denomination is irrelevant because market forces will preclude any supplier or customer from using this aspect of a contract to extract a consistent gain over time. Do you agree or disagree; why?

Answers to these questions varied considerably, depending on the prevailing practices and market conditions of a given industry. The sample was too small to allow general conclusions to be drawn about trends in invoicing policy, with one exception. This is that where companies have sufficient freedom of choice, they try to invoice in strong currencies as far as they can. This applies not only to exporters in strong currency countries, which in most cases appear to have been remarkably successful in maintaining the proportion of their exports invoiced in their domestic currencies, but also to other multinational corporations. It is true that the choice of currency for the invoicing of sales

abroad is not determined in all cases by hopes of obtaining a price advantage; a British international company, for instance, reported having followed a consistent policy of invoicing most of its exports, made through foreign subsidiaries, in the currencies of the importing countries. But, whatever its motives, about 85 percent of its exports are invoiced in currencies other than (and historically mostly stronger than) sterling, which is the exact reverse of domestic currency invoicing reported by companies based in strong-currency countries.

In this respect companies appear to disagree with the academic argument in their invoicing policies. Although there may be no price gain from strong-currency invoicing over the long run, there is often a gain in the short-run. Moreover, price increases are thought to be more acceptable to importers when attributable to larger forces, like exchange rate alterations, than when they are attributable to the exporting firm alone. Put another way, strong currency invoicing is thought to provide a temporary gain, or at least respite, before international competition produces price adjustments offsetting part or all of the exchange rate changes.

9. With floating exchange rates, capital and trade controls should be both less prevalent and less restrictive. Has this been your experience or do restrictions continue to inhibit the free flow of money and goods?

Some said that their experience supported the view that capital, and, to a lesser extent, trade controls had become less prevalent and less restrictive. However, most respondents appeared to be disappointed that floating rates had not led to a greater degree of liberalization, and some said that they had not seen any easing in capital and trade controls—except in the case of the United Kingdom, where greater freedom is properly attributed to developments other than those in the foreign exchange market.

10. Have you, as a result of floating exchange rates, taken any decisions to achieve a desired accounting result and sacrificed an economic gain?

Most said they had not taken any such decisions. One US respondent pointed out that balance sheet cover, under certain circumstances, could be construed as achieving an accounting result while sacrificing an economic gain; another said that his company had not hedged book exposures with regard to the economic cost of such actions; but another said that the combination of floating exchange rates and FAS 8 accounting rules had caused his company to incur an economic loss.

11. What new tools, devices, and techniques in international finance have developed in the last few years? Do you use more frequently today some of the financial techniques e.g. swaps, parallel loans, leading and lagging etc. which predate the collapse of fixed foreign exchange rates?

No corporation reported the development of new financial techniques to cope with the risks of floating foreign exchange rates. However, most acknowledged they had employed more frequently established methods of protecting themselves against loss or seeking to achieve a profit. These included more frequent use of swaps, parallel loans, forward exchange markets and fully-hedged multicurrency financing options.

12. What economic and other factors are considered when forecasting foreign exchange-rate movements?

A host of economic and political factors were mentioned in answers to this question. The emphasis remained firmly on differential inflation rates for medium and long term forecasting, and on market sentiment in the short term.

13. Are the foreign exchange markets "efficient," i.e. the price of a currency at any time reflects the combined knowledge of market participants and is a good estimate of its intrinsic value?

All respondents stated, in effect, that, in the words of one of them, "the price of a currency does reflect the combined knowledge of most participants at a given time but, it is not necessarily a good estimate of the currency's intrinsic value" or, as another said, "Much of the 'combined knowledge' is misinformation or guessing that is frequently exaggerated by the latest news, good or bad, for the currency."

14. Do you believe you (or your advisors) can consistently predict future foreign exchange-rate movements more accurately than "the market"?

No one claimed that he could, but all of them try. Many agreed with those bankers who said that the forward rate is not a predictor of future spot rates, but a reflection of interest rate differentials.

Some respondents implicitly based their policy of selective hedging on the claim that they, or their advisors, can forecast exchange rate movements more accurately than the forward markets in many cases. They can certainly be mistaken and an example was provided in the course of one interview. A corporate treasurer said he had formed a

strong view about the outlook for his country's currency and had acted on that view. A week later, his view was disproved in the markets. Nevertheless, the claim of corporations that they can often outguess the forward markets is a credible one. So long as foreign exchange forecasts are on the right side of the forward market in identifying currencies as being over or under-valued in terms of their forward quotations, the "advice" conveyed by the forecast will be right even when the forecast itself is wrong. A view of exchange rate trends can prove useful in practical terms without being able to forecast precise exchange relationships. That may explain the willingness of companies to hedge selectively.

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Group of Thirty

The Group of Thirty was established in December 1978, in order to explore the basic problems in the functioning of the international economic system. It meets twice a year, for two to three days at a time. Between these meetings, study groups and researchers gather material to serve as the basis for the Group's discussions.

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Balance-of-Payments Problems of Developing Countries

A report by a study group of the Group of Thirty

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Balance-of-Payments Problems of Developing Countries

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Balance-of-Payments Problems of Developing Countries

The Imbalance in External Payments

1. The further surge in oil prices in 1979-80 has dramatically increased the scale of international payments imbalances. The oil-exporting countries ran a combined current account surplus of about $115 billion in 1980, requiring the rest of the world to run a deficit of the same magnitude. Non-oil developing countries have been hit particularly hard. They have had to contend not only with much higher oil bills (net oil imports of oil-importing developing countries rose by some $40 billion from 1978 to 1980) but with two other inter-related changes in their external environment: first, the slowdown in the industrialized countries, which provide their main export markets; and secondly, the move to positive real interest rates, which has raised the real cost of borrowed funds. Both factors have tended to raise their current deficit further and to reduce their debt-servicing capacity. The combined current account deficit of non-oil LDCs totalled some $80 billion in 1980 and could rise further this year, possibly approaching $100 billion. As the International Monetary Fund's "World Economic Outlook" stated last year, the projected deficit of non-oil LDCs is all the more worrying because it is coupled with virtual stagnation in the volume of imports. These countries are therefore confronted with a new threat to their growth, a threat that is almost certainly greater than that in 1974, after the first oil shock.

2. Admittedly, it is possible that OPEC's surplus will again diminish more rapidly than most observers presently anticipate, as it did in 1974-76. This could take place as a result of a deepening and prolongation of present recessionary tendencies, and signal a failure of the world economy to adjust satisfactorily to the increase in the real price of oil; or it could

result from a rapid growth in OPEC imports in conjunction with an unchanged or lower real oil price. On other assumptions, however, OPEC's annual surplus might be maintained at very high levels for a number of years; the surplus will certainly be underpinned by the rapid growth in earnings on OPEC's accumulated financial assets. It would not be surprising if the surplus were to be still in the range of $40-$50 billion in the mid-1980s. But the function of such scenarios is not to forecast future developments, but to illuminate the issues and dilemmas facing policy makers. They also underline the extreme uncertainty of the present outlook.

3. It remains important, in this context, to keep the size of the non-oil LDC deficit in perspective. In connection with the payments desequilibria caused by the 1973-74 oil price increases, the IMF calculated that the growth of the deficit, from about $8 billion a year in 1967-72 to some $30 billion in 1977, was in no sense disproportionate if one took account of the growth in real economic activity and the rise in world trade prices over the period. A somewhat similar perspective is called for as the world faces again disequilibria of unprecedented size. In the five-year period from 1974 to 1979, the LDCs have experienced a real growth of about 5 per cent per year and world prices of manufactures in terms of U.S. dollars have increased by at least ten per cent per year. Such a conjunction of quantity and price increases produces a doubling of value figures in about five years. Thus, figures for current account deficits for the LDCs that are foreseen for the early 1980s are not by themselves markedly out of line with the figures of half a decade earlier.

4. Whether inflows of capital—much of it on a commercial basis—can be economically sustained on such a scale is not, in the first instance, a question of their size by itself; it depends on the use made by developing countries of the total resources, domestic and foreign, at their disposal. Critical questions in this connection are the behavior of the savings ratio in the country, the improvement in the ratio of energy use to GNP, and the development of net external indebtedness to GNP. These are questions to be considered on a country-by-country basis. (In many individual cases, there may be little scope, for instance, in an improvement of energy use to GNP). They relate to the success that the country has made of its adjustment to the higher cost of energy and the declining growth rate in the industrial world. The more adverse the external conditions in which developing countries have to operate their economies, the greater the policy adjustments that will be required from them to maintain a strong rate of growth and to be creditworthy—in the basic economic sense of that word—for large capital flows.